**DISCRETE MATHEMATICS**
**VOLUME 113, NUMBERS 1–3, 5 APRIL 1993**

# CONTENTS

*D. Archdeacon and J. Dinitz*
Indecomposable triple systems exist for all lambda 1

*F.E. Bennett, J. Yin and L. Zhu*
On the existence of perfect Mendelsohn designs with $k = 7$ and $\lambda$ even 7

*J.I. Brown and S. Watson*
Mutually complementary partial orders 27

*B.A. Davey and H.A. Priestley*
Partition-induced natural dualities for varieties of pseudo-complemented distributive lattices 41

*P. Erdős and F. Galvin*
Monochromatic infinite paths 59

*R. Labahn*
Information flows on hypergraphs 71

*H.-G. Leimer*
Optimal decomposition by clique separators 99

*K.-W. Lih*
Rank inequalities for chordal graphs 125

*K. McAvaney, J. Robertson and D. DeTemple*
A characterization and hereditary properties for partition graphs 131

*S. Olariu*
Quasi-brittle graphs, a new class of perfectly orderable graphs 143

*M. Salvetti*
On the homotopy theory of complexes associated to metrical-hemisphere complexes 155

*J.W. Sander*
On maximal antihierarchic sets of integers 179

*J.H. Schmerl and W.T. Trotter*
Critically indecomposable partially ordered sets, graphs, tournaments and other binary relational structures 191

*W. Schwärzler and A. Sebő*
A generalized cut-condition for multiflows in matroids 207

*T. Zaslavsky*
The projective-planar signed graphs 223

Communication

*J. Harant*
Toughness and nonhamiltonicity of polyhedral graphs 249

Notes

*D.W. DeTemple, M.J. Dineen, J.M. Robertson and K.L. McAvaney*
Recent examples in the theory of partition graphs 255

*P. Erdős and C.C. Rousseau*
The size Ramsey number of a complete bipartite graph 259

*I.P. Goulden and S. Pepper*
Labelled trees and factorizations of a cycle into transpositions 263

*P. Katerinis*
Regular factors in regular graphs 269

*E.W. Lambeck*
On distance regular graphs with $c_i = b_1$ 275

*J.E. Simpson*
A bipartite Erdős–Ko–Rado theorem 277

*J. Yin and S. Wu*
Four new BIBDs with block size seven 281

*H. Zhou*
Chromatic difference sequences and homomorphisms 285

Author index to volume 113 293